

1. An encrypted television signal, comprising:
a plurality of encrypted samples of the television program, the samples being encrypted under a first encryption method; and
an unencrypted portion.
2. The encrypted television signal according to claim 1, wherein the television signal is a digital television signal, and wherein the encrypted samples comprise encrypted packets, and the unencrypted portion comprises unencrypted packets.
3. The encrypted television signal according to claim 2, wherein the digital television signal complies with an MPEG standard, and wherein the encrypted packets are identified by a packet identifier.
4. The encrypted television signal according to claim 2, wherein the digital television signal complies with an MPEG standard, and wherein the unencrypted packets are identified by a first packet identifier, and wherein the encrypted packets are identified by the first packet identifier.
5. The encrypted television signal according to claim 2, wherein the digital television signal complies with an MPEG standard, and wherein the unencrypted packets are identified by a first packet identifier, and wherein the encrypted packets are identified by a second packet identifier.

1 6. An encrypted television program, comprising:
2 a plurality of unencrypted packets; and
3 a plurality of encrypted packets, wherein both the unencrypted and the
4 encrypted packets are required to decode the television program.
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6 7. The encrypted television program according to claim 6, wherein the
7 unencrypted packets and encrypted packets comprise transport stream packets.
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9 8. The encrypted television program according to claim 6, wherein the digital
10 television signal complies with an MPEG standard, and wherein the encrypted and
11 unencrypted packets are identified by a packet identifier.
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13 9. The encrypted television program according to claim 6, wherein the digital
14 television signal complies with an MPEG standard, and wherein the unencrypted
15 packets are identified by a primary packet identifier, and wherein the encrypted
16 packets are identified by a secondary packet identifier.
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1 10. A method of encrypting content, comprising:
2 identifying a portion of the content to encrypt according to a selection
3 algorithm where less than 100% of the content is encrypted;
4 encrypting the identified content portion according to a first encryption
5 method to produce a first encrypted content portion;
6 encrypting the identified content according to a second encryption method
7 to produce a second encrypted content portion; and
8 combining an unencrypted content portion along with the first and second
9 encrypted content portions to produce partially dual encrypted content.

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11 11. The method according to claim 10, further comprising combining the content
12 portion with the first and second encrypted content portions to produce dual
13 partially encrypted content.

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15 12. The method according to claim 10, further comprising distributing the
16 unencrypted content portion along with the first and second encrypted content
17 portions.

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19 13. The method according to claim 10, wherein the content comprises a
20 television signal and the partially dual encrypted content comprises a partially dual
21 encrypted television signal.

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23 14. The method according to claim 13, further comprising distributing the
24 partially dual encrypted television signal over one of the following: a cable system,
25 a terrestrial broadcast system, satellite system, and as packaged media.

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27 15. The method according to claim 13, wherein the television signal has an
28 audio portion, a video portion and a system information portion.
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1 16. The method according to claim 15, wherein the selection algorithm
2 comprises selecting system information for encrypting.

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4 17. The method according to claim 15, wherein the selection algorithm
5 comprises selecting the audio portion for encrypting.

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7 18. The method according to claim 15, wherein the selection algorithm
8 comprises selecting the video portion for encrypting.

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10 19. The method according to claim 10, wherein the content is comprised of
11 multiple programs and wherein the selection algorithm comprises sequentially
12 selecting each program for a period of time for encryption.

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14 20. The method according to claim 10, wherein the content is comprised of
15 multiple programs and wherein the selection algorithm comprises selecting fewer
16 than 100% of the programs for a period of time for encryption.

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18 21. The method according to claim 10, wherein the content is comprised of
19 blocks of data and wherein the selection algorithm comprises selecting N blocks
20 for every Mth block of content for encryption, where N is less than M.

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22 22. The method according to claim 10, wherein the content is comprised of data
23 structures and wherein the selection algorithm comprises selecting a fraction of the
24 data structures for encrypting.

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26 23. The method according to claim 10, wherein the content is comprised of
27 compressed data, wherein the algorithm comprises selection of data needed for
28 decompressing the content for encrypting.

1 24. The method according to claim 10, wherein the content is comprised of a
2 plurality of elementary streams, and wherein the algorithm comprises selecting
3 header information for encrypting.
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5 25 The method according to claim 24, wherein the header information
6 comprises at least one of packetized elementary stream (PES) header, sequence
7 header, sequence header extension, and group of pictures (GOP) header.
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9 26. The method according to claim 10, wherein the content is packetized using
10 a first packet identifier (PID), and the PID for packets containing content selected
11 for encryption is mapped to a second PID.
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13 27. The method according to claim 10, further comprising distributing the
14 unencrypted content portion separately from the first and second encrypted content
15 portions.
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17 28. An electronic storage medium storing instructions which, when executed on
18 a programmed processor, carry out the method of encrypting content according to
19 claim 10.
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21 29. An electronic transmission medium carrying encrypted content encrypted by
22 the method according to claim 10.

1 30. A method of encrypting content, comprising:
2 encrypting content according to a first encryption method to produce a first
3 encrypted content portion; and
4 combining the first encrypted content portion with an unencrypted content
5 portion to produce partially encrypted content.
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7 31. The method according to claim 30, wherein the partially encrypted content
8 comprises a television signal.
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10 32. The method according to claim 31, wherein the partially encrypted television
11 signal is distributed over one of the following: a cable system, a terrestrial
12 broadcast system, satellite system, and as packaged media.
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1 33. A method of managing multiple access control systems within an audio
2 visual content distribution system, comprising:

3 identifying a portion of the content to replicate for each of a plurality of
4 access control systems according to a selection algorithm wherein less than 100%
5 of the content is replicated; and

6 replicating the identified portion.

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8 34. The method according to claim 33, further comprising encrypting the
9 replicated identified portion using a first encryption algorithm.

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11 35. The method according to claim 34, further comprising:

12 replicating the identified portion a second time to produce a second
13 replicated portion; and

14 encrypting the second replicated portion using a second encryption
15 algorithm.

16
17 36. The method according to claim 35, further comprising combining the
18 identified portion with the encrypted replicated portion and the encrypted second
19 replicated portion to produce dual partially encrypted content.

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21 37. The method according to claim 36, wherein the dual partially encrypted
22 content is distributed over one of the following: a cable system, a terrestrial
23 broadcast system, satellite system, and as packaged media.

24
25 38. The method according to claim 36, further comprising assigning a separated
26 packet identifier to packets containing each of the identified content, the encrypted
27 replicated identified portion and the encrypted second replicated portion.

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29 39. The method according to claim 33, wherein the content comprises television
30 content.

1 40. A method of encoding a packetized digital television signal, comprising:
2 encrypting a portion of the packets containing the digital television signal
3 according to a first encryption algorithm;
4 encrypting the portion of the packets containing the digital television signal
5 according to a second encryption algorithm;
6 leaving a portion of the packets containing the digital television signal
7 unencrypted;
8 assigning a primary packet identifier to the unencrypted packets;
9 assigning a primary packet identifier to the packets encrypted under the first
10 encryption algorithm; and
11 assigning a secondary packet identifier to the packets encrypted under the
12 second encryption algorithm.
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14 41. The method according to claim 40, further comprising generating information
15 linking the digital television signal to the primary and secondary packet identifiers.
16

17 42. The method according to claim 41, further comprising transmitting the
18 information linking the digital television signal to the primary and secondary packet
19 identifiers as program specific information (PSI).
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21 43. The method according to claim 40, further comprising transmitting the
22 unencrypted packets along with the packets encrypted under the first and second
23 encryption algorithms over one of the following: a cable system, a terrestrial
24 broadcast system and satellite system.
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1 44. A packet selector and duplicator device, comprising:
2 input means for receiving a stream of clear packets from a satellite
3 descrambler;
4 means for selecting a group of packets for dual encryption while leaving a
5 remaining set of clear packets;
6 means for duplicating the selected packets to provide a first and second set
7 of duplicate packets;
8 means for assigning a first packet identifier to the first set of duplicate
9 packets and assigning a second packet identifier to the second set of duplicate
10 packets;
11 means for multiplexing the first set of duplicate packets and the second set
12 of duplicate packets with the set of clear packets to produce an output stream of
13 packets.
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15 45. The apparatus according to claim 44, further comprising a first encrypter that
16 encrypts the first set of duplicate packets and the set of clear packets under a first
17 encryption algorithm.
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19 46. The apparatus according to claim 44 further comprising a first encrypter that
20 encrypts packets having the first packet identifier under a first encryption algorithm.
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22 47. The apparatus according to claim 44, further comprising a second encrypter
23 that encrypts the second set of duplicate packets under a second encryption
24 algorithm.
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26 48. The apparatus according to claim 47, wherein the stream of clear packets
27 further comprises packets containing system information; and further comprising
28 means for modifying the system information to identify the encryption used to
29 encrypt the second set of duplicate packets.
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1 49. The apparatus according to claim 44, further comprising a second encrypter
2 that encrypts packets having the second packet identifier under a second
3 encryption algorithm.
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5 50. The apparatus according to claim 44, further comprising packet remapping
6 means for remapping packet identifiers so that the first set of duplicate packets and
7 the set of clear packets are assigned the same packet identifier.
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9 51. The apparatus according to claim 44, wherein the means for selecting a
10 group of packets for dual encryption selects the packets by determining that the
11 packet contains an elementary stream header.
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13 52. The apparatus according to claim 44, wherein the means for selecting a
14 group of packets for dual encryption selects the packets according to a time
15 dependent algorithm.
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17 53. The apparatus according to claim 44, wherein the means for selecting a
18 group of packets for dual encryption selects the packets by determining that the
19 packet contains audio information.
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21 54. The apparatus according to claim 44, wherein the means for selecting a
22 group of packets for dual encryption selects the packets by determining that the
23 packet contains video information.
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25 55. The apparatus according to claim 44, wherein the means for selecting a
26 group of packets for dual encryption selects the packets by determining that the
27 packet contains system information.
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1 56. A packet identifier remapping apparatus, comprising:
2 a demodulator that demodulates a stream of modulated packets, the stream
3 of packets comprising clear packets with a first packet identifier, encrypted packets
4 with a second packet identifier and packets with a third packet identifier; and
5 a remapper that changes the packet identifiers so that the clear packets with
6 the first packet identifier and the encrypted packets with the second packet
7 identifier have the same packet identifier.
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9 57. The apparatus according to claim 56, wherein the packets with the third
10 packet identifier comprise clear packets and further comprising an encrypter for
11 encrypting the packets having the third packet identifier under a different algorithm
12 than that used to encrypt packets having the second packet identifier.
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14 58. The apparatus according to claim 56, wherein the packets with the third
15 packet identifier comprise encrypted packets, and wherein the packets with the
16 third packet identifier are encrypted under a different algorithm than that used to
17 encrypt packets having the second packet identifier.
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19 59. The apparatus according to claim 56, wherein the stream of modulated
20 packets are quadrature amplitude modulated; and wherein the demodulator
21 comprises a quadrature amplitude modulation demodulator.
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23 60. The apparatus according to claim 56, further comprising a multiplexer that
24 combines the remapped packets with the packets with the third packet identifier
25 to produce an output data stream.
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27 61. The apparatus according to claim 60, further comprising a quadrature
28 amplitude modulator that modulates the output data stream.
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62. The apparatus according to claim 56, wherein the stream of modulated packets further comprises packets containing system information; and further comprising means for modifying the system information to identify the encryption used to encrypt the packets having the third packet identifier.

63. A method carried out at a television provider headend, comprising:
receiving a feed of scrambled television content in the form of a stream of
packets;
descrambling the scrambled television content to produce a stream of clear
packets;
selecting a packet for dual encryption;
duplicating the packet to provide first and second packets;
re-mapping the first and second packets to first and second packet
identifiers;
encrypting the first packet under a first encryption algorithm to produce a first
encrypted packet;
encrypting the second packet under a second encryption algorithm to
produce a second encrypted packet;
re-mapping clear packets to the first packet identifier.

64. The method according to claim 63, further comprising assembling a partially
encrypted stream of packets by combining clear packets with the first packets and
the second packets.

65. The method according to claim 63, wherein the first and second packets are
inserted adjacent one another in the partially encrypted stream of packets.

66. The method according to claim 63, wherein the packets are selected for dual
encryption based upon contents of the packet.

67. The method according to claim 63, wherein the packets are selected for dual
encryption based upon a timing sequence for sampling the stream of clear packets.